

INTELLIGENT COMPUTER TOOLS

CENTER

The Center for Intelligent Computer Tools "graduated" this year. This was the fifth year of funding. The Center focuses on interactive image segmentation, composition and digital image editing, automated creation/browsing of digital (microfilm) libraries, semi-automated creation of virtual environments-especially with Virtual Venues for the 2002 Winter Olympics

TECHNOLOGY

The technology development effort concentrates in Intelligent Scissors/Paint, represents full color images with limited palette and no visual loss, resolution enhancement to improve (internet) image appearance through data dependent triangulation; document understanding; automated zoning and browsing of digital documents by content; line intersection: automated object-based line intersection for recovery of 3D (building) geometry; virtual environments: creation of realistic virtual environments (Olympics, BYU) from real-world images; image blending: automatic shape blending and image object blending, object-based image editing: ungroup, delete, texture synthesis; image-based object modeling: photographic based resolution enhancement of objects

*License agreements signed
with Park City Entertainment
and Adobe Systems*

BRIGHAM YOUNG UNIVERSITY

Can you imagine.....

Careening down an Olympic bobsled run, aware of the twisting turns and angles of the sled while watching the surrounding landscape rush by, all on your computer screen with every visual sensation artificially created by software?



ACCOMPLISHMENTS

Algorithms for intelligent paint segmentation and localization were updated with high level visual effects. The prototype digital microfilm parser/browser was enhanced with significant new tools. The virtual environment terrain database for the Virtual Olympics was expanded and terrain details such as buildings, a bobsled run, and ski runs were added. Additional license agreements were signed with Adobe Systems and Park City Entertainment.

Contact Information

Director: William A. Barrett
Brigham Young University
Dept. of Computer Science
Provo, UT 84602
801-378-7430
barrett@cs.byu.edu